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ABSTRACT

Presented are abstracts of documents and research pertaining to the clinical description, laboratory diagnosis, management, and therapy of syphilis and gonorrhea. Abstracted case studies of other minor venereal and related diseases are also included, as are bibliographies on current research and evaluation, public health methods, and behavioral studies. Also presented is a list of current books in print. (Related documents: SP 007 494 and SP 007 496.) (JB)

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# CLVD

## CURRENT LITERATURE ON

*Abstracts and Bibliography*

### NUMBER TWO

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Prepared by  
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# FOREWORD

Current Literature on Venereal Disease presents a survey of recently published literature in the field. Effort is made to keep the abstracts as current as possible and sufficiently informative to enable the reader to decide whether the original article would be of interest to him. For the benefit of the reader, where possible the address of the first author is included with each abstract. Publication of the abstract does not necessarily imply endorsement by the Health Services and Mental Health Administration of the original article or of commercial products or other drugs or methods of therapy mentioned therein.

In compiling these abstracts we utilize the Medical Literature Analysis and Retrieval System (MEDLARS) of the National Library of Medicine. Under this system, 2,300 foreign and domestic biomedical periodicals are searched for material dealing with or related to venereal disease. We also utilize the libraries of Emory University, the Center for Disease Control and other federal agencies.

From time to time, as new books appear which deal with the venereal diseases, a list will be appended. Again, publication of such a list does not imply endorsement by the Health Services and Mental Health Administration.

Current Literature on Venereal Disease is published three or four times each year and is indexed annually. Distribution is made to medical and other interested personnel and institutions throughout the United States and in 70 additional countries. Individuals desiring to be placed on the mailing key to receive Current Literature on Venereal Disease on a regular basis should write to the Center for Disease Control, Attention: Technical Information Services, State and Community Services Division, Atlanta, Georgia 30333.

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# CONTENTS

FOREWORD .....	iii
DIAGNOSIS AND MANAGEMENT .....	39
SYPHILIS .....	39
Clinical .....	39
Laboratory Diagnosis .....	40
Therapy .....	43
Selected Bibliography .....	44
GONORRHEA .....	47
Clinical .....	47
Laboratory Diagnosis .....	49
Therapy .....	50
Selected Bibliography .....	53
MINOR VENEREAL AND RELATED DISEASES .....	55
Selected Bibliography .....	59
RESEARCH AND EVALUATION .....	61
Selected Bibliography .....	63
PUBLIC HEALTH METHODS .....	65
Selected Bibliography .....	68
BEHAVIORAL STUDIES .....	67
Selected Bibliography .....	69

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## DIAGNOSIS AND MANAGEMENT

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### SYPHILIS

#### Clinical

A CASE OF SERO-POSITIVE PRIMARY SYPHILIS OF THE TONSIL. N.H. Vincenti—R.A.F. Hospital, Cosford, Nr. Wolverhampton, Staffs, England. J LARYNGOL OTOL (London) 85:869-870, August 1971.

A survey of the literature reveals very few recent references to primary syphilis in otorhinolaryngology. Once again, it is becoming necessary to eliminate syphilis in the etiology of the ear, nose and throat diseases. The case reported here was referred as an urgent case of suspected lymphosarcoma of the tonsil with massive cervical glandular enlargement. The patient, a white male aged 17, complained of a sore throat and a stiff neck. Examination revealed an irregular ulcer on the right tonsil which was enlarged and slightly injected. The left tonsil was normal in appearance. All the glands on the right side of the neck were grossly swollen, painless and confluent. When it was reported that the Wassermann and Kahn tests were strongly positive, patient admitted to oral and anal coitus. Further serologic tests all were positive. Patient was treated with Triplopen 2.5 m. units twice weekly and when last seen the cervical adenopathy had subsided and the right tonsil had returned to normal.

\* \* \*

NEPHROTIC SYNDROME: A COMPLICATION OF SECONDARY SYPHILIS. M.D. Hellier, A.D.B. Webster, A.J.M.F. Eisinger—(Dr. Webster) Clinical Research Centre, Northwick Park Hospital, Middlesex, England. BR MED J (London) 4:404-405, November 13, 1971.

The association between secondary syphilis and the nephrotic syndrome is well recognized

but very uncommon. Case report is presented of a 22-year-old woman who was admitted to the hospital for investigation of generalized edema, sudden weight increase, and an irritant rash. Physical examination revealed no lymphadenopathy. Laboratory tests revealed gross proteinuria and hypoalbuminemia. Patient was treated initially with frusemide but despite increasing doses she continued to deteriorate. When positive serological results for syphilis were received, a course of procaine penicillin was started. Within three days she began to make rapid recovery and during the next three weeks she lost weight and became edema-free. Despite the satisfactory clinical response the renal picture did not change; in view of this a renal biopsy was performed. On light microscopy the histological appearances were those of endothelial cell proliferative glomerulonephritis. Electron microscopy showed a proliferative type of glomerulonephritis predominantly involving the endothelial cells but with changes in the epithelial and mesangial cells as well as the basement membranes. Patient was seen regularly as an outpatient after her discharge from the hospital. After six months the proteinuria persisted; however, after sixteen months all tests were normal.

\* \* \*

CONGENITAL SYPHILIS IN THE NEWBORN INFANT: CLINICAL AND PATHOLOGICAL OBSERVATIONS IN RECENT CASES. Ella H. Oppenheimer and Janet B. Hardy—The Johns Hopkins Hospital, Baltimore, Maryland 21205. JOHNS HOPKINS MED J (Baltimore) 129:63-82, August 1971.

Authors' summary: A marked decline has been noted in autopsied cases of congenital syphilis since the advent of penicillin therapy. Two hundred and seventy-four documented cases were autopsied at The Johns Hopkins Hospital in the 30 years between 1910 and

1940, and only 47 in the succeeding 30 years. Three of these cases have occurred in the past 13 months. It should be emphasized that congenital syphilis cannot be diagnosed from clinical findings alone but specific laboratory determinations are needed. The basic pathological pattern of congenital syphilis continues to be interstitial inflammation and fibrosis. Gummata were not seen in recent cases, but the pancreatitis and intestinal lesions, when combined with bone alterations, form a pathognomonic pattern permitting differentiation from erythroblastosis fetalis, congenital viral diseases and toxoplasmosis.

\* \* \*

**CLINICAL PROGRESSION OF OCULAR SYPHILIS AND NEUROSYPHILIS DESPITE TREATMENT WITH MASSIVE DOSES OF PENICILLIN. FAILURE TO DEMONSTRATE TREPONEMES IN AFFECTED TISSUES.** C. N. Sowmini—Institute of Venerology, Government General Hospital, Madras-3, India. BR J VENER DIS (London) 47:348-355, October 1971.

Author's summary and conclusion: Seven cases of late ocular and neurosyphilis are described. Six of these seven cases, in which disease progressed despite anti-syphilitic treatment, had reactive tests for syphilis either in serum or in CSF in addition to historical, epidemiological, and clinical evidence to establish a diagnosis of syphilitic infection. In one case of treated congenital syphilis with interstitial keratitis, the serological tests had become nonreactive. Two patients had concomitant tuberculosis and two had gross malnutrition.

The persistence of *Treponema pallidum* despite treatment has been demonstrated in late cases (Collart and others, 1962; Yobs and others, 1964). In these seven cases the failure to demonstrate treponemes in body fluids or in tissues showing clinical progression, does not eliminate the possibility that these organisms were present in the lesions. Nevertheless, it is to be expected that some forms of disease may progress because of irreversible tissue damage due to syphilis whether the causative organisms have been eliminated by treatment or not. Thus the neurological lesions of tabes dorsalis led to the development of fresh Charcot's arthropathy

in four cases and of a perforating ulcer in one. It may well be that the signs of neurological damage, including optic atrophy, may increase after treatment because of sclerotic rather than specific changes in the affected tissues. Certainly the damage resulting from syphilitic iritis may lead to glaucoma. It is possible that chronic infections like tuberculosis, leprosy, and filariasis, which are prevalent in tropical areas, may contribute to clinical progression.

\* \* \*

**VENEREAL DISEASE AND THE GREAT.** A. Dickson Wright. BR J VENER DIS (London) 47:295-306, August 1971.

"Venereal disease has been no respecter of persons and many notable figures have been afflicted in the past. Royal personages and politicians have enjoyed no immunity, and poets, musicians, writers, and artists longing for new experiences to inspire new works have ultimately had to face reality and publicity when complications arose in the form of stricture, tabes, insanity, or blindness, with the whole world aware of their misfortunes. . . . Now things have been greatly changed by the impact of antibiotics, and the venereal history of the new great will become almost a secret in the future because the tell-tale 'lost nose', aneurysm, paralysis, insanity, or blindness will be no more." As mentioned above, the author reviews the afflictions of great figures of the past in literature and philosophy, the armed forces, the church, art, music, monarchy, and medicine.

\* \* \*

### Laboratory Diagnosis

**AUTOMATED REAGIN TEST FOR SYPHILIS IN A MULTICHANNEL BLOOD GROUPING MACHINE.** Arnold L. Schroeter, Howard F. Taswell, Robert R. Kierland, and Maxine A. Sweatt—Sections of Dermatology and Clinical Pathology, Mayo Clinic and Mayo Foundation, Rochester, Minnesota 55901. AM J CLIN PATHOL (Baltimore) 56:43-49, July 1971.

Authors' summary: The automated reagin test for syphilis, with properly controlled per-



formance, is a reliable screening procedure and can be adapted to a multichannel Auto-Analyzer blood grouping machine with satisfactory sensitivity and specificity. Overall agreement between the single-channel and multichannel methods was 97.9 percent on 698 specimens tested. With modifications in the decant. system in the multichannel automated continuous-flow system there is an increase in sensitivity, with specificity equal to or greater than that of the manual VDRL slide test.

\* \* \*

**THE AUTOMATED REAGIN TEST (ART) FOR SYPHILIS IN A PUBLIC HEALTH LABORATORY.** Bernice S. West, Cynthia D. Brinkman, and Evelyn W. Hibbard—Laboratory Division, State Department of Health, P.O. Box 1689, Hartford, Connecticut 06101. *HEALTH LAB SCI* (New York) 8:220-224, October 1971.

Authors' summary: An evaluation study in the Connecticut State Laboratory compared the Automated Reagin and VDRL Slide tests on 2000 routine specimens and 500 specimens referred for confirmation. The agreement between the two reagin tests was 99.1 percent in the total routine group and 85.2 percent in the total referred group.

Five hundred and one specimens were tested in the ART, VDRL Slide and FTA-ABS tests. Analysis of the results showed the ART to be less reactive and more specific than the VDRL Slide test. Significantly better agreement was seen between the ART and the FTA-ABS test than between the VDRL Slide and the FTA-ABS tests.

Quantitative tests performed on 300 reactive sera showed that in approximately one-third of the sera the ART and the VDRL Slide test titers were in absolute agreement, and 99 percent agreed within two doubling dilutions.

Performance of the ART required close monitoring. Although some difficulty was encountered in adjusting the machine to produce readable results and to attain the proper level of sensitivity, improvements in equipment, since this study was conducted, have greatly decreased these problems.

The cost of the automated test was found to be approximately 17 cents per test as compared to 11 cents per VDRL Slide test.

In our experience the Automated Reagin Test, when carefully performed, is a satisfactory serologic test for syphilis.

\* \* \*

**FLUORESCENT TREPONEMAL ANTIBODY TESTS ON CEREBROSPINAL FLUID.** M. F. Garner and J. L. Backhouse—Institute of Clinical Pathology and Medical Research, Lidcombe, Australia. *BR J VENER DIS* (London) 47:356-358, October 1971.

Authors' summary: The TPI, FTA, and FTA-ABS tests were carried out on 336 samples of cerebrospinal fluid, received in a routine testing laboratory for syphilis. The FTA test showed 93.2 percent and the FTA-ABS test 96.6 percent agreement with the TPI test. The discrepancies which occurred between some of the test results in twenty cerebrospinal fluids are discussed. It is concluded that the FTA-ABS technique used in this series [substituting CSF for serum] gives acceptable results.

\* \* \*

**POSITIVE FLUORESCENT TREPONEMAL ANTIBODY TEST IN SYSTEMIC LUPUS ERYTHEMATOSUS IN CHILDHOOD: REPORT OF A CASE.** Ronald P. Lesser and Edward J. O'Connell—Section of Publications, Mayo Clinic, 200 First Street, S.W., Rochester, Minnesota 55901. *J PEDIATR* (St. Louis) 79:1006-1008, December 1971.

"Borderline or atypical positive reactions to the FTA test should alert the clinician to the possibility of processes other than syphilitic infection. If the reaction is strongly positive, one must always consider syphilis but the results should be evaluated in the context of the clinical findings." The case here reported is the youngest (12-year-old female) thus far cited to have an atypical positive FTA reaction ("beading") with systemic lupus erythematosus.

\* \* \*



ATYPICAL FTA-ABS TEST REACTION. AN INITIAL CLUE IN THE DIAGNOSIS OF LUPUS ERYTHEMATOSUS. Stephen J. Kraus and Katie C. Daniels—Venereal Disease Research Laboratory, Center for Disease Control, Atlanta, Georgia 30333. ARCH DERMATOL (Chicago) 104:260-261, September 1971.

Authors' abstract: An atypical, "beaded" pattern of fluorescence of the *Treponema pallidum* antigen has been reported to occur when sera from certain patients with lupus erythematosus (LE) are tested in the fluorescent treponemal antibody-absorption (FTA-ABS) test. In the present case, follow-up of a reactive Venereal Disease Research Laboratory (VDRL) slide test led to detection of a beaded fluorescence pattern in the FTA-ABS test. Awareness and reporting of this atypical fluorescence provided the initial clue that led to the diagnosis of LE.

\* \* \*

FTA-ABS AND VDRL SLIDE TEST REACTIVITY IN A POPULATION OF NUNS. Jerome N. Goldman, and Majorie A. Lantz—106 Irving Street, N.W., Washington, D.C. 20010. JAMA (Chicago) 217:53-55, July 5, 1971.

Authors' abstract: Although the fluorescent treponemal antibody absorption (FTA-ABS) test is extremely sensitive and widely utilized as a confirmatory test for syphilis, additional data are needed concerning its specificity. The FTA-ABS tests performed on the serum samples of 250 female lifelong celibates with no history of acquired or congenital syphilis indicated less than a 1 percent incidence of unexplained, probably false-positive reactions. None of the serum samples were reactive to Venereal Disease Research Laboratory (VDRL) slide testing.

\* \* \*

CHARACTERISTICS OF FLUORESCIN LABELLED ANTIGLOBULIN PREPARATIONS THAT MAY AFFECT THE FLUORESCENT TREPONEMAL ANTIBODY-ABSORPTION TEST. Paul H. Hardy and E. Ellen Nell—Department of Microbiology, The Johns Hopkins University School of Medicine, Baltimore, Maryland 21205. AM J CLIN PATHOL (Baltimore) 56:181-186, August 1971.

Authors' abstract: A high titer fluorescein labelled antiglobulin preparation was compared with an antiglobulin of lesser potency in fluorescent treponemal antibody (FTA) titrations. The former gave higher FTA titers than the latter and therefore detected fewer antibody molecules per treponemal antigen particle. In addition, determination of the working titer of a labelled globulin by the procedure recommended by the USPHS was found to be influenced by the treponemal antibody content of the reference serum used for the titration. Moreover, titration of a labelled antiglobulin with a reference serum of high antibody content yielded a working titer that was too dilute for optimal antibody detection. FTA-ABS test results varied when antiglobulins were used at different working titers obtained in this fashion.

\* \* \*

CLINICAL AND FACTORIAL EVALUATION OF 110 CBFP REACTORS. Eija A. Johansson—Department of Dermatology and Venereology, University Central Hospital, Helsinki, Finland. ACTA DERM VENEREOL (Stockholm) 51:SUPPL 65:1-37, 1971.

Author's summary: A clinical and factorial evaluation is presented of 110 chronic biological false-positive (CBFP) reactors who had been under long-term observation. Systemic lupus erythematosus (SLE) was diagnosed in 14 (13%) of the patients, and probable SLE was diagnosed in 15 additional patients. In nine of the SLE patients, and eleven of the patients with probable SLE, the diagnosis was made during the follow-up period of, on the average, 7 years. Four patients were diagnosed as having cryoglobulinemic purpura, and four probable Hashimoto's thyroiditis. In three cases of each disease the diagnosis was made during the follow-up period. Further, two patients had

chronic cold hemagglutinin disease, two hemolytic anemia, and in one multiple myeloma developed. Altogether, 9 of the 110 CBFP reactors had recurrent deep thromboses despite circulating anticoagulants, and in all nine of them multiple small leg ulcers developed. Of these patients three were men and in all three the first clinical manifestation was pneumonia with pleural effusion. Purpura was observed in four of these nine patients.

A high frequency of serological abnormalities, especially of an auto-antibody type, was encountered in patients with definite SLE, but the frequencies were also rather high in patients who were clinically in apparent health or had only minor illnesses, i.e. skin diseases, arthralgia, myalgia or photosensitivity. . . . In addition, a factorial evaluation was performed in order to define CBFP reactors in terms of the interdependence between the patient characteristics studied. Altogether, 33 variables were included in the analysis. Eight principal factors were taken into account and further subject to Varimax rotation. . . . It may be concluded that the eight Varimax factors taken into account corresponded to clinically meaningful symptom-complexes. On the whole the factor analysis of the CBFP reactors gave a rather well defined and, at the same time, clinically descriptive picture of this complex phenomenon.

\* \* \*

**IMMUNOFLUORESCENT STAINING FOR THE DETECTION OF *Treponema pallidum* IN EARLY SYPHILITIC LESIONS.** A. E. Wilkin-son and L. P. Cowell—Venereal Disease Reference Laboratory (Public Health Laboratory Service), The London Hospital, London, England. BR J VENER DIS (London) 47:252-254, August 1971.

Authors' summary: The results of indirect fluorescent antibody staining and conventional darkground examination for *T. pallidum* on 81 specimens from suspected early syphilitic lesions are compared. The IFA technique with a suitably absorbed antiserum is thought to be a useful adjunct to ordinary darkground examination, particularly when the latter gives inconclusive results.

\* \* \*

**MICROTESTS ON GLASS WITH FRESH BLOOD PLASMA AND ACTIVE SERUM IN SYPHILIS (RUSSIAN).** T. I. Milonova and G. F. Timchenko. VESTN DERMATOL VENEROL (Moskva) 45:40-44, May 1971.

English summary: "In parallel studies by microtests on glass of 688 specimens of blood and active sera and 742 specimens of plasma, collected from patients with different forms of syphilis—subjects examined for syphilis, patients with dermatologic disease and donors—microprecipitation tests with plasma, active serum and blood gave good results from donors and dermatologic patients. In examination of treated patients with primary syphilis with weakly positive complement fixation test or with low antibody titers, microtests did not always detect lipoidal antibodies."

\* \* \*

## Therapy

**LATE RESULTS OF TREATING SYPHILIS WITH BICILLIN-1, 3, 4, AND BICILLIN-3, 4 IN COMBINATION WITH PYROGENAL (RUSSIAN).** T. V. Vasiliev. VESTN DERMATOL VENEROL (Moskva) 45:50-58, January 1971.

English summary: "Late results of treatment of 1326 patients with different forms of syphilis were studied. After termination of treatment the patients had been systematically observed in the dispensary for 7 to 14 years. In 25 (2.6%) patients treatment was unsuccessful. In patients with communicable forms of syphilis treated with bicillin-1 failure of the treatment was registered in 3.5%, with bicillin-3—in 6.6 percent, bicillin-4—in 2.7 percent; treatment with bicillin-3 and 4 in combination with pyrogenal failed only in 0.8 percent of patients. In order to avoid failures of treatment it is recommended that beginning with the first course of treatment of patients with secondary fresh, relapsing and late forms of syphilis injections of pyrogenal be given in addition to the specific therapy."

\* \* \*

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# GONORRHEA

## Clinical

ATYPICAL GONORRHOEA. Anonymous. BR MED J (London) 3:322, August 7, 1971.

"The increase in cases of gonorrhea throughout the world has been accompanied by more frequent recognition of a relatively mild form of metastatic infection which seems to be difficult to diagnose." Although the characteristics of this condition have been described from time to time, the correct diagnosis is frequently missed in the early stages. The syndrome occurs more often in women than in men, presumably because uncomplicated gonorrhea is often symptomless or difficult to diagnose in women, and treatment is delayed. It is apt to present as a triad of fever, polyarthritis which may be migratory, and lesions of the skin. In a few patients with atypical gonorrhea the gonococcus has been grown in blood culture. The patient usually has undiagnosed genital gonorrhea and may have signs of salpingitis. The response to systemic penicillin is prompt and satisfactory.

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ATYPICAL GONORRHEA. J. Vahrman—Infectious Diseases Unit, Western Hospital, London S.W.6, England. BR MED J (London) 3:579-580, September 4, 1971.

Between 1964 and 1970 six cases of benign gonococcemia were diagnosed in hospitals of the Chelsea and Kensington group. Only one of the six cases was a male. In a letter to the editor, author reports another male case, a homosexual aged 36. On admission patient reported recurrent attacks of pyrexia, malaise and vomiting. Four days before admission, he developed attacks of shivering and painful discolored skin lesions on his extremities. His last sexual contact with a male had taken place three months before onset of his illness. Since he was not very ill, it was decided not to treat him until the diagnosis was confirmed bacteriologically. During the interim, he developed painful swelling of the right wrist, and the skin lesions continued to appear in crops, mainly on the elbows, knees,

hands and feet. *N. gonorrhoeae* was isolated from a small ulcer in his rectum and from the urethra after prostatic massage. The gonococcal complement fixation test was strongly positive. Following treatment with 500,000 U. penicillin intramuscularly for 15 days, smears and cultures were negative.

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THE GONOCOCCAL ARTHRITIS-  
DERMATITIS SYNDROME. King K. Holmes,  
Paul J. Wiesner, and Alf H. B. Pedersen—  
University of Washington, Seattle, Washington.  
ANN INTERN MED (Philadelphia) 75:470-471,  
September 1971.

The gonococcal carrier state is similar to the meningococcal carrier state, usually producing no systemic symptoms but occasionally complicated by bacteremia and disseminated disease. Authors briefly review recently reported clinical studies which show the increasing frequency with which the commonest manifestation of gonococcemia, an arthritis-dermatitis syndrome, is being recognized. Pustular skin lesions are usually sterile on culture, but gonococci can often be seen in Gram-stained smears from such lesions. Immunofluorescent antibody (IFA) staining of direct smears from pustules affords a more rapid confirmation of the diagnosis of gonococcemia than any other method. Of the total of 52 patients with gonococcal arthritis from whom blood cultures were obtained, *N. gonorrhoeae* was isolated from the blood of 14 of 31 patients with skin lesions but only 3 of 21 without skin lesions ( $P < 0.01$ ). The gonococcal complement fixation (CF) test on paired acute and convalescent sera can provide further confirmation of gonococcal infection in patients with acute arthritis.

On the basis of endocervical cultures from all socioeconomic groups in Seattle during 1969–1970, the annual incidence of gonococcal sepsis would appear to be 0.6 percent of all infected women at risk. With regard to the course of gonococcal sepsis in men, 10 (37%) of 27 patients in this current study are men. Only two men had symptomatic urethritis, whereas 5 or 6 others from whom cultures were obtained from the urethra before treatment were discovered to have asymptomatic gonorrhea. Authors conclude that it is now apparent that a

careful research for asymptomatic urethral infection is essential in men with suspected gonococcal sepsis.

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**GONOCOCCAL ARTHRITIS IN AN ADOLESCENT GIRL.** Gerard F. Brewer, Julian R. Davis, and Moses Grossman—(Dr. Grossman) 1001 Potrero Street, San Francisco, California 94110. *AM J DIS CHILD* (Chicago) 122:253-254, September 1971.

Authors' abstract: Gonococcal arthritis may occur in female adolescents, may involve more than one joint, and the *Neisseria gonorrhoeae* organism may be recovered from the periarticular tissues after initial acute inflammation has subsided, as illustrated by a girl aged 14 year and 8 months. Intravenously given penicillin G sodium, 100,000 units/kg in four equal doses for four days and orally given penicillin for an additional two weeks was administered. She showed dramatic clinical improvement within 24 hours of definitive treatment. Roentgenograms of joints showed no bone involvement. Although the incidence of gonococcal arthritis in patients with gonorrhea is only about 1 percent, prompt diagnosis and treatment of this and other types of septic arthritis in a child is important because subsequent growth tends to exaggerate joint residua. Penicillin, which is effectively transported into the synovial fluid, is the antibiotic of choice.

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**GONOCOCCAL ARTHRITIS. A SURVEY OF 54 CASES.** Charles L. Cooke, Duncan S. Owen, Jr., Robert Irby, and Elam Toone—1200 E. Broad St., Richmond, Virginia 23219. *JAMA* (Chicago) 217:204-205, July 12, 1971.

Authors' abstract: A survey of 54 cases of gonococcal arthritis shows it to be primarily a disease of young adults, with women outnumbering men. Misdiagnosis and resulting delay in treatment occurred in 25 percent of cases. Inspection of a gram-stained smear of either cervical or urethral discharge proved to be the most frequently affected. If the possibility of gonococcal arthritis exists, the patient should be

treated immediately with antibiotics without waiting for a definite diagnosis.

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**RECTAL GONORRHEA IN WOMEN (NORWEGIAN).** Kristian Odegaard, Herdis Gundersen and Thor Gundersen—Statens Institutt for Folkehelse, Bakteriologisk avdeling, Oslo, Norway. *TIDSSKR NOR LAEGEFOREN* (Oslo) 91:1474-1476, July 10, 1971.

English summary: "Of 221 females with gonorrhea, 118 (53%) had positive cultures from rectal specimens. In 6 instances, gonorrhea was demonstrated exclusively from the rectum. There was no difference in the relapse frequency between patients with and without rectal gonorrhea after penicillin treatment. Rectal specimens should be taken from all female patients suspected of having gonorrhea."

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**GONOCOCCAL MENINGITIS.** Howard L. Taubin and Lewis Landsberg—(Dr. Landsberg) West Haven Veterans Administration Hospital, West Haven, Connecticut 06516. *N ENGL J MED* (Boston) 285:504-505, August 26, 1971.

"Gonococcal meningitis, although rarely diagnosed, is probably more common than generally appreciated, and may be expected to increase further with the rise in gonorrhea. . . . In patients who have bacterial meningitis, evidence of current or prior gonococcal infection of the genital tract or joints should suggest the possibility of gonococcal meningitis." Of the 28 cases of gonococcal meningitis found in the literature, almost all were preceded by some manifestation of acute or chronic gonococcal infection. A case report is presented of a 20-year-old female admitted to the hospital after 24 hours of fever and disorientation. Six months previously she had noted a skin rash and joint pains. Examination revealed pain and stiffness of the knees, hands, wrists and elbows. Tender, red indurated lesions were noted on all extremities. The initial diagnosis was meningococcal meningitis; however, on the following day blood cultures and spinal fluid were reported positive for *N.*



*gonorrhoeae*. Following penicillin treatment patient was afebrile and asymptomatic.

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### **Laboratory Diagnosis**

AN AUTOMATED COMPLEMENT FIXATION PROCEDURE FOR DETECTING ANTIBODY TO *N. gonorrhoeae*. William L. Peacock, Jr.—Venereal Disease Research Laboratory, Venereal Disease Branch, Center for Disease Control, Atlanta, Georgia 30333. HSMHA HEALTH REP (Washington) 86:706-710, August 1971.

Using an automated complement fixation technique, human sera were tested with a gonococcal protoplasm antigen and a commercially produced gonococcal complement fixation antigen. The instrument used dilutes serum specimens and adds reagents automatically. At a 1:2 serum dilution the gonococcal protoplasm antigen reacted with 80 percent of sera from infected females, 50 percent of sera from infected males, and 4 percent of sera from presumed noninfected individuals. When tested under similar conditions using the same sera, the Wellcome antigen reacted with 72 percent of sera from infected females, 45 percent of sera from infected males, and 10 percent of sera from presumed noninfected individuals. It is concluded that complement fixation assays merit further attention in the development of serologic tests for gonorrhea.

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AN ATTEMPT TO PROVE ANTIBODIES AGAINST *Neisseria gonorrhoeae* IN GONORRHOEA PATIENTS (CZECHOSLOVAKIAN). E. Pulchartova and F. Novotny. CESK EPIDEMIOL MIKROBIOL IMUNOL (Praha) 20:270-276, September 1971.

English summary: "A total of 373 sera from 222 gonorrhea patients were tested by CFR, an antigen prepared by means of the modified Labzoffsky's method. Among 138 men 23 percent were found positive and among 84 women 24 percent. In the group of positively reacting men, clinical diagnosis of chronic or recidivating gonorrhea was confirmed in 60 percent. In

positively reacting women the difference between acute and chronic cases was impossible to evaluate. Considerable variability in results of serological examinations of gonorrhea patients is discussed. CFR is recommended as a complementary method of usual examination methods especially in chronic patients."

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HUMAN SERUM ANTIBODIES REACTING WITH ENDOTOXIN FROM *Neisseria gonorrhoeae*. J. A. Maeland and Bodil Larsen—Department of Dermatology, School of Medicine, University of Bergen, 5000 Bergen, Norway. BR J VENER DIS (London) 47:269-272, August 1971.

Authors' summary: Serum from thirty patients with gonorrhea and from thirty healthy blood donors was examined for antibodies to determinants *a* and *b* of endotoxin from gonococci using indirect haemagglutination techniques. Nearly all of the sera from patients and two-thirds of the normal sera contained antibodies of the IgM class to these determinants. With most patient sera the titres of the IgM antibodies appeared comparable to the titres of normal sera. One-third of the patient sera also contained antibodies, presumably of IgG class, which reacted in the indirect haemagglutination test. Antibodies of this type could not be detected in serum from healthy donors. All sera from patients and the majority of those from healthy individuals contained antibodies which could be detected by means of an anti-human globulin serum. Many of the patient sera gave elevated titres of these antibodies. It is suggested that this finding was due to a rise in incomplete IgG antibodies in patients with gonorrhoea.

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EVALUATION OF THE GONOCOCCAL COMPLEMENT-FIXATION TEST. C. S. Ratnatunga—Whitechapel Clinic, The London Hospital, London, England. BR J VENER DIS (London) 47:279-288, August 1971.

Author's summary: The results of the GCFT in 1,873 patients have been evaluated. A positive reaction was found in uncomplicated gonorrhea

twice as frequently in the female (34%) as in the male (18%). In complicated gonorrhea in the female the test was positive in a higher proportion of cases (41%) but this difference from the uncomplicated cases was not statistically significant. The seropositivity rates in the groups compared varied between 2.5 and 6.5 percent, except in non-specific salpingitis in which it was 12.5 percent. Reasons for this high figure are suggested. A past history of urethritis or of genital inflammation was present in a significantly higher proportion of those with positive reactions than in those with negative results, suggesting the persistence of seropositivity from previous infections. There was no significant difference in the frequency of a past history of bronchitis or asthma or both between seropositive and seronegative patients. Since the sensitivity of the test is low it is felt that there is no reason to perform the test routinely on all patients attending V.D. clinics. It may be helpful in problem cases, but in such cases the sera should be examined in a laboratory where the GCFT is performed regularly.

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**SEROLOGIC DETECTION OF GONORRHEA** (Letter to Editor). B.B. Diena—Research Section, Biologics Control Laboratories, Canadian Communicable Disease Center, Ottawa 3, Ontario, Canada. ANN INTERN MED (Philadelphia) 75:135, July 1971.

Author's comments were based on articles regarding the need for a rapid, inexpensive, epidemiological screening test for gonorrhea. "It is of great importance in all the suggested tests for the serodiagnosis of gonorrhea that the specificity of the test be very high, with minimum cross-reactivity to antibodies evoked by other bacteria, such as meningococci and staphylococci." Results of the bentonite flocculation test, developed by the author and others, are reviewed: (1) There is no cross reactivity between antibodies to *Neisseria gonorrhoeae* and those evoked by a number of *Neisseria* species and staphylococci. (2) Data provided by both Schmale and Magnusson indicate a detection rate with complement fixation of 50–80 percent for infected women and 20–30 percent in men. With the bentonite test, with 713 human sera, 77 percent of the male gonorrhea

patients and 78 percent of the females developed circulating antibodies. (3) In patients with syphilis 34 percent of the sera had a positive titer, which is not surprising in view of the frequency of double infection of these patients with gonorrhea.

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**SOLID NON-AGAR EGG MEDIUM FOR CULTURES OF NEISSERIA (POLISH).** M. Pekowski and B. Szyszymar. POL TYG LEK (Warszawa) 26:988-990, June 28, 1971.

English summary: "The authors proposed a new simple egg medium for cultures of *Neisseria*. The medium consist mainly of egg-mass coagulated on Petri dishes at 35°C. This medium contains no agar and meat extract which contain inhibitors of growth of *Neisseria*, and owing to this it does not require addition of neutralizing agents.

"Swabs of the urogenital mucosa from 520 subjects suspected of having gonorrhea (386 women and 134 men) were inoculated on this non-agar solid egg medium. Growth of *Neisseria gonorrhoeae* was observed on this medium in 56 out of 264 non-treated women and in 12 out of 122 treated women. In the group of 101 non-treated men *Neisseria* were cultured in 39 cases, while in the treated group of 33 men they were cultured in 3 cases.

"The control medium was a Roiron agar one and, in all, 110 strains of *Neisseria* were cultured on this medium, similarly as on the non-agar egg medium. The simple egg medium is thus suitable for routine cultures in the diagnosis of gonorrhea."

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### Therapy

**TREATMENT OF GONORRHOEA WITH AQUEOUS BENZYL PENICILLIN PLUS PROBENECID.** Ann-Marie Niordson and Susanne Ullman—Department of Dermatology, University of Copenhagen, Rigshospitalet, Copenhagen, Denmark. ACTA DERM VENEREOL (Stockholm) 51:311-314, 1971.

Included in this study were all out-patients treated for gonorrhea (237 males and 191

females) at the University Department of Dermatology and Venereology, Rigshospitalet, Copenhagen, from April 1968 to March 1969. The diagnosis was made by microscopy of smears and/or culture. Of 341 patients treated with 5 megaunits aqueous benzyl penicillin and 1 g probenecid, 19 were not followed up, 11 (3.4%) relapsed, with 97 percent primary cures. None of the 11 relapses had changes of sensitivity patterns of the isolated gonococcus strains since the first infection. The group treated with 1 megaunit aqueous benzyl penicillin plus 1.2 megaunits aqueous procaine penicillin consisted of 57 patients, 6 of whom were not followed up, 5 (9%) relapsed, with 91 percent primary cures. Of the 5 relapses, all 5 strains had a decreased sensitivity. Treatment of patients with a positive culture from the rectum presented no special problems, in contrast to that reported by Brundin *et al.* Authors report no relapses were found in this group.

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**ORAL SINGLE-DOSE TREATMENT OF MALE AND FEMALE GONORRHEA WITH AMPICILLIN ALONE AND COMBINED WITH PROBENECID (DANISH).** Anne Bro-Jorgensen, and Tage Jensen—København Kommunes Vederlagsfri Konsultation i kønssygdomme, Tietgensgade 31, Denmark. UGESKR LAEGER (København) 133:1253-1256, July 2, 1971.

English summary: "An account is given of single-dose treatment of uncomplicated gonorrhea in 1,543 males and 746 females with oral administration of 1 and 2 g ampicillin alone and combined with 1 g probenecid. The best results were obtained with the combined treatment: 97.9 percent were cured following 1 g ampicillin (796 cases) and 98.8 percent following 2 g ampicillin (771 cases), both sexes together. In 37 percent of the females with gonorrhea, gonococci could be demonstrated in cultures from the rectum. The percentage of cures in these cases was identical with that in the isolated urogenital infections. Nine cases where therapy was unsuccessful with 2 g ampicillin and 1 g probenecid were all cured following re-treatment with the same dosage. No side-effects from the treatment were observed."

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**ORAL AMPICILLIN IN UNCOMPLICATED GONORRHOEA. III. RESULTS OF TREATMENT IN WOMEN WITH POSITIVE RECTAL CULTURE.** Gunnel Eriksson—Department of Dermatology, Södersjukhuset, Stockholm, Sweden. ACTA DERM VENEREOL (Stockholm) 51:305-310, 1971.

The incidence of positive rectal cultures in female gonorrhea patients at the Outpatient Clinic for Venereal Diseases at Södersjukhuset for two consecutive years has been approximately 42 percent. In the first year 268 female patients had a positive rectal culture and were treated with an intramuscular injection of 2.2 MIU penicillin G. In the second year 370 women had a positive rectal culture and were treated with ampicillin orally, three groups being formed on a random basis, viz. patients given a single dose of 2 g ampicillin, a single dose of 2 g ampicillin combined with 1 g probenecid, and two doses of 1 g ampicillin with 5 hours' interval (1-day treatment). A comparison has been made of the results of treatment in the four groups. The percentage of treatment failures was lowest in the group treated with ampicillin combined with probenecid in a single dose, and highest in the group given ampicillin in a high single dose. There was a statistically significant difference only between these two groups. Attention was paid to the *in vitro* sensitivity of the gonococcal strains during the two years covered by the study.

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**A TRIAL IN TREATMENT OF GONORRHEA WITH A SULPHONAMIDE WITH PROLONGED EFFECT (SULFAPHERIN) (DANISH).** Bent Lund Jorgensen—København Kommunehospital, Klinikken for Hud- Og Kønssygdomme, København, Denmark. UGESKR LAEGER (København) 133:1257-1258, July 2, 1971.

English summary: "During a four month period, it was found that all of the gonococcal strains investigated (a total of 76) were completely sensitive to sulphonamide (sulphathiazol). A therapeutic series was therefore commenced employing the preparation sulphaperin with prolonged effect which was administered as a single dose of 2 g orally. After seven patients

had been treated by this method, it was abandoned on account of insufficient effect. The present preliminary investigation suggests that the degree to which gonococci can be influenced by sulphonamides has altered in recent years towards greater sensitivity but that this condition does not justify clinical employment of sulphonamides as the sole therapeutic agent."

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**UNCOMPLICATED GONORRHEA TREATED WITH TRIMETHOPRIM AND SUPHAMETHOXAZOL (DANISH).** Bent Lund Jorgensen and Sven Ancher Kvorning—Kobenhavns Kommunehospital, Klinikken for Hud- og Konssygdomme, Kobenhavn, Denmark. UGESKR LAEGER (Kobenhavn) 133:1259-1260, July 2, 1971.

English summary: "Employing a combination treatment consisting of 500 mg Trimethoprim and 2500 mg sulphamethoxazol administered in a single oral dose to 108 males with uncomplicated gonorrhea, clinical and bacterial cures were obtained in 85. One further patient was cured by repeated administration of the same dose one week later."

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**VARIATIONS IN SERUM CONCENTRATIONS OF PENICILLIN AFTER INJECTIONS OF AQUEOUS PROCAINE PENICILLIN G WITH AND WITHOUT ORAL PROBENECID.** C. E. Cornelius, III, A. L. Schroeter, A. Lester, and J. E. Martin, Jr.—Venereal Disease Research Laboratory, Center for Disease Control, Atlanta, Georgia 30333. BR J VENER DIS (London) 47:359-363, October 1971.

Authors' summary: Eight male patients were treated with 2.4 mega units aqueous procaine penicillin G (APPG) and penicillin serum assays were performed on blood drawn at 1, 2, 3, 4, 6, 9, 12, 18, 24, 36, 48, and 72 hours after therapy. Approximately an 8-fold variation in peak serum penicillin levels was noted. In addition four groups of eleven patients were treated with 2.4 and 4.8 m.u. APPG, with and without the addition of a 2 g. oral dose of probenecid. Penicillin serum assays were

performed on blood drawn at 0, 3, 6, 24, and 48 hours. Although the range and averages of peak penicillin serum concentrations were higher in those patients receiving probenecid, biological variation tended to mask the effect of probenecid. This variation may be due to the factors governing the release of penicillin from the injection site and may subsequently affect cure rates.

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**TREATMENT OF GONORRHOEA WITH A SINGLE ORAL DOSE OF MINOCYCLINE.** W. C. Duncan, J. M. Glicksman, J. M. Knox, and W. R. Holder—Department of Dermatology and Syphilology, Baylor College of Medicine, Houston, Texas 77025. BR J VENER DIS (London) 47:364-366, October 1971.

Authors' summary: In the search for an antibiotic for the treatment of gonorrhea effective in a single oral dose, minocycline, a new synthetic derivative of tetracycline, was administered in a dose of 200, 300, or 400 mg. to 170 men and eleven women with culturally proven acute gonorrhea. After the 200 mg. dose of minocycline, urethral cultures in three out of four men returning for examination were positive. Both the 300 mg. and the 400 mg. doses yielded failure rates of approximately 25 percent in men. However, all seven women who were followed up were clinically and culturally free of gonorrhea after being treated with the 400 mg. dose. Although no conclusion can be drawn from such a small number of cases, the results were considered to justify a larger study of cases in women.

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### Gonorrhea

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## MINOR VENEREAL AND RELATED DISEASES

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VENEREAL DISEASE OF THE ANAL REGION. R. K. Menda, H. L. Chulani, S. J. Yawalkar, B. S. Kulkarni—G. T. Hospital, Bombay, India. DIS COLON RECTUM (Philadelphia) 14:454-459, November–December 1971.

Between January 1969 and April 1970, 750 cases of various diseases affecting the anorectum were seen at the G. T. Hospital, Bombay. Of these, anal coitus was admitted by 30 patients. This study group of 30 patients included 25 males, 4 females, and one boy. VDRL tests were done in all cases, with positive results in 12 (40%) and negative results in 18 (60%), indicating that syphilis was present in some patients who had diseases other than anal syphilis. Fifteen patients (13 males, 2 females) had multiple nonsyphilitic fissures; three patients (2 males, 1 female) had syphilitic fissures. There were seven cases of condyloma acuminatum; condyloma latum was seen in two patients. Two patients (12-year-old boy, 1 female) had primary chancres.

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ANAL WARTS AND ANAL COITUS. J. D. Oriol Department of Venereal Disease, St. Thomas' Hospital, London, England. BR J VENER DIS (London) 47:373-376, October 1971.

Author's summary: Seventy-two men and eight women with anal warts have been studied. Sixty of the men (83%) and five of the women admitted to anal coitus before the appearance of the warts. Only limited tracing of sexual contacts was possible, but no evidence of sexual infectivity of the disease was found. In a retrospective study of 500 homosexual male patients, it was noticed that anal warts were seven times as common as penile warts. Anal warts, although often associated with anal coitus, may not comprise a sexually transmitted

disease, and other possible explanations for the development of these warts are discussed.

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*Corynebacterium vaginale* VAGINITIS IN PREGNANT WOMEN. Jay F. Lewis, Susan M. O'Brien, Unal M. Ural, and Thomas Burke—Department of Pathology, Baroness Erlanger Hospital, Chattanooga, Tennessee 37403. AM J CLIN PATHOL (Baltimore) 56:580-583, November 1971.

Authors' abstract: A total of 1,008 women attending a public clinic for pregnancy, postpartum care, and gynecologic complaints was studied for the presence of *Corynebacterium vaginale* (*Haemophilus vaginalis*). The overall incidence was 18.9 percent. In the pregnant group, those with vaginitis had an isolation rate of 44.0 percent, compared with a rate of 10.4 percent among those without vaginitis. Statistical analyses of the data strongly suggests that *C. vaginale* is a common causative agent of vaginitis. There is a higher incidence of *Corynebacterium vaginale* in pregnant women than in nonpregnant women.

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NEONATAL *Haemophilus vaginalis* (*Corynebacterium vaginalis*) INFECTION. Marvin S. Platt—Children's Hospital D.C., 425 13th N.W., Washington, D.C. 20009. CLIN PEDIATR (Philadelphia) 10:513-516, September 1971.

Author's abstract: Two cases of neonatal *Haemophilus vaginalis* (*Corynebacterium vaginalis*) infection are presented. In addition, eight recent neonatal-maternal cases have been summarized. The data obtained from these cases strongly suggest that the organism is a maternal, fetal and neonatal pathogen. Measures which



promote successful isolation and identification are outlined.

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ISOLATION OF CORYNEBACTERIA FROM NON-SPECIFIC URETHRITIS. G. Furness, M. H. Kamat, Z. Kaminski, and J. J. Seebode—Department of Microbiology, Division of Urology, College of Medicine and Dentistry of New Jersey, Newark, New Jersey 07102. J UROL (Baltimore) 106:577-561, October 1971.

Authors' summary: Thirty-two patients with non-specific urethritis and 49 controls have been examined for infection with classical mycoplasmas and with the species of corynebacteria isolated previously from patients with non-specific urethritis. Nine controls had epididymitis, 15 had prostatitis and the other 25 had miscellaneous conditions believed to be non-infectious. Similar corynebacteria were isolated from 15 patients with non-specific urethritis (47%), 2 prostatitis patients (13.3%), none of the epididymitis patients and 1 of the 25 miscellaneous controls (4%). They were isolated from 80 percent of the patients with non-specific urethritis during the first half of the investigation and from only 17.6 percent during the second period, suggesting that corynebacteria are not the only etiological agents of non-specific urethritis.

The biochemical reactions and antibiotic sensitivity of the isolates are given. *Mycoplasma hominis* was cultured from patients with non-specific urethritis and controls. In addition, 4 mycoplasmas have been isolated which have the characteristics of the classical mycoplasmas. However, they cannot be identified and presumably are new species. Their significance in urogenital infections has still to be determined.

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GENITAL HERPES VIRUS FINDINGS IN RELATION TO CERVICAL NEOPLASIA. Ivor Royston, Laure Aurellian, and Hugh J. Davis—Department of Microbiology, The Johns Hopkins University School of Medicine, Baltimore, Maryland 21205. J REPROD MED (Chicago) 4:9-13, April 1970.

Authors' summary: By utilizing a neutralization test (multiplicity analysis) capable of

specifically detecting antibodies to herpes virus type 1 and type 2 in human sera, it was found that the prevalence of antibody to herpes virus type 2 is virtually 100 percent in patients with cytologically, colposcopically, and histologically confirmed atypia, carcinoma in situ and invasive carcinoma. Statistically significant differences ( $P < .0005$ ) are observed for the type 2 antibody prevalence between these patients and matched control populations. Such differences do not exist with regard to two other venereal diseases. The association between preinvasive carcinoma and genital herpes lends support to the hypothesis that this virus may be the etiologic agent, either directly or as a cocarcinogen, for human cervical neoplasia.

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GENITAL HERPES IN TWO SOCIAL GROUPS. William E. Rawls, Herman L. Gardner, Raymond W. Flanders, Sandra P. Lowry, Raymond H. Kaufman, and Joseph L. Melnick—Department of Virology and Epidemiology, Baylor College of Medicine, Houston, Texas 77025. AM J OBSTET GYNECOL (St. Louis) 110:682-689, July 1, 1971.

Authors' abstract: Genital herpes was studied in two social groups. Among Caucasians of the upper socioeconomic class with symptomatic primary genital herpes, 78 percent lacked antibodies to either herpesvirus type 1 or type 2 in their initial serum samples. Among Negroes of the lower socioeconomic class attending a venereal disease clinic, only 29 percent of persons with primary genital herpes initially lacked antibodies to either type of herpesvirus, and, among women of this group, asymptomatic infections occurred. The antibody response to herpesvirus type 2 among individuals with genital herpes was similar in both social groups. The occurrence of genital herpes among 14 of 18 (78%) female sex contacts of males with genital herpes indicates that the virus is venereally transmitted.

\* \* \*

INCIDENCE OF *Trichomonas vaginalis* AND OF ASPECIFIC VAGINITIS IN AN APPARENTLY HEALTHY FEMALE POPULATION. COLPOSCOPIC AND CYTOLOGICAL ASPECTS (ITALIAN). B. Cuscianna, A. Salvati, M. Cascialli—Istituto "Regina Elena" per la Studio e la Cura dei Tumori, Roma, Italy. MINERVA GINECOL (Torino) 23:270-272, March 31, 1971.

To evaluate the frequency of vaginitis in an apparently healthy population, authors reviewed the cytological and clinical reports on 10,200 women examined during 1967–1968 at the Queen Helen Institute for the Study and Treatment of Tumors, Rome. None of the women (aged 30–60 years) had come to the clinic because of vaginal disorders. Three smears were taken from each patient—one from the posterior fornix and two from the cervix. The Papanicolaou staining method was used. Vaginitis was found in 33 percent of the women for both years. *Trichomonas* was reported in 382 in 1967 and 486 in 1968 (9% and 8% respectively). Of the 868 women with *T. vaginalis* vaginitis, 604 had objective symptoms including leukorrhea. Colposcopy was performed upon 745 women; the findings are given in detail. Inflammatory exudates appeared in 92 percent of the smears. Over 90 percent showed perinuclear halos, nuclear enlargement, false eosinophilia of the cells, and cytoplasmic vacuoles; 79 percent showed nuclear degeneration.

\* \* \*

INFECTION OF THE URINARY SYSTEM WITH *Trichomonas vaginalis* IN NEWBORN FEMALE INFANTS (POLISH). Zdzislaw Worwag—1 Klinika Poloznictwa i Chorob Kobiacych AM, Lodz, Poland. WIAD PARAZYTOL (Wroclaw) 17:355-358, 1971.

English summary: "The urinary sediment of 110 newborn female infants 1 to 7 days old and of their mothers have been examined. Eighty mothers appeared to have *Trichomonas vaginalis*. The control group consisted of 30 healthy mothers and their newborn daughters. The urine of newborn infants was centrifugated; and the sediment examined directly in a phase-contrast microscope. The preparations were stained with the Giemsa method. Of 80 children

born from mothers infected with *Trichomonas*, this parasite was found in the urine sediment of 44, i.e. in 55 percent of the examined children. In the control group trichomonads were not found. From this it follows that a part of newborn females became infected during the delivery."

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OCCURRENCE OF *Trichomonas vaginalis* IN THE URINARY SYSTEM OF NEWBORN MALE INFANTS (POLISH). Zdzislaw Worwag—1 Klinika Poloznictwa i Chorob Kobiacych AM, Lodz, Poland. WIAD PARAZYTOL (Wroclaw) 17:351-354, 1971.

English summary: "The urine sediments of 70 women and their 70 newborn sons have been examined. The presence of live forms of *Trichomonas vaginalis* were found in the vaginae of the investigated women. The control group consisted of 30 healthy mothers and their newborn sons. The urine sediments of the newborn infants were examined with a phase-contrast microscope, the preparations being stained with the method of Giemsa. *T. vaginalis* were demonstrated in 20 of the 70 investigated infants, i.e. in 28.5 percent. In the control group this parasite was not found. From these investigations it follows that the newborn male infants might be infected in the course of delivery."

\* \* \*

INDUCTION OF IN-VIVO RESISTANCE OF TRICHOMONAS VAGINALIS TO NITRIMIDAZINE. F. Benazet, L. Guillaume—Laboratoires de Recherches, Societe des Usines Chimiques Rhone-Poulenc, 94-Vitry-sur-Seine, France. LANCET (London) 2:982-983, October 30, 1971.

In a letter to the editor, authors comment on three points with regard to the work of deCarneri. (1) *Strains resistant to metronidazole*. By repeated passages in mice treated with metronidazole, it is possible to make strains of *T. vaginalis* resistant *in vivo* to the compound. However, the parasites which have become resistant *in vivo* maintain an *in vitro* sensitivity, which is practically normal, to metronidazole

and to its metabolite. With the exception of one case, the clinical failures reported in the literature were cured by a second course of metronidazole or by doubling the dose. (2) *Increase in resistance to metronidazole*. Again, based on the literature, authors report that the strains which have been studied since 1962, and in particular those from patients who have presented therapeutic difficulties, have shown the same sensitivity to the drug as those which were studied before 1962. (3) *Cross-resistance between metronidazole and nitrimidazine*. Authors' experiments show that the strain F of *T. vaginalis* made resistant *in vivo* to metronidazole has also become resistant to nitrimidazine; the strain Du has been easily made resistant *in vivo* to nitrimidazine by passage in mice treated by this compound; and there is cross-resistance of *T. vaginalis* to the two products. Nitrimidazine is inactivated *in vitro* by the same organisms and to the same degree as metronidazole. If clinical resistance of *T. vaginalis* to metronidazole does appear, authors conclude that it does not seem that nitrimidazine will provide a solution to the problem.

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**NITRIMIDAZINE COMPARED WITH METRONIDAZOLE IN THE TREATMENT OF VAGINAL TRICHOMONIASIS.** B. A. Evans, R. D. Catterall—Department of Venereology, James Pringle House, Middlesex Hospital, London, WIN 8AA, England. BR MED J (London), 4:146-147, October 16, 1971.

Authors' summary: A new substituted nitrimidazole, nitrimidazine (Naxogin), is compared with the established drug, metronidazole (Flagyl), for the treatment of vaginal trichomoniasis in a randomized double-blind trial. Nitrimidazine cured 39 (68%) out of 57 patients and showed no undesirable effects other than nausea in one patient. Metronidazole cured 51 (89%) out of 57 patients and also caused nausea in one patient; this cure rate corresponds with that previously reported in other trials. In the recommended dosage, nitrimidazine is inferior to metronidazole but is sufficiently effective to be useful in cases of intolerance to metronidazole.

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**NEURO-OPHTHALMOLOGICAL STUDY OF LATE YAWS AND PINTA. II. THE CARACAS PROJECT.** J. Lawton Smith, N. J. David, S. Indgin, C. W. Israel, B. M. Levine, J. Justice Jr., J. A. McCrary, III, R. Medina, P. Paez, E. Santana, M. Sarkar, N. J. Schatz, M. L. Spitzer, W. O. Spitzer, and E. K. Walter—Department of Ophthalmology, Bascom Palmer Eye Institute, University of Miami School of Medicine, Miami, Florida 33124. BR J VENER DIS (London) 47:226-251, August 1971.

Authors' summary: A cooperative study with the National Institute of Venereology, Caracas, Venezuela of a group of 123 patients consisting of cases of late yaws, late pinta, and matched controls, was performed with emphasis on the neuro-ophthalmological findings. Ocular and neurological abnormalities were not found in cases of pinta, with the single outstanding exception of one patient with pinta and bilateral interstitial keratitis. However, several patients with late yaws showed neuro-ophthalmological abnormalities. These consisted of light-near dissociation of the pupils, perivascular pigmentation, and vascular sheathing in the optic fundi, as well as moderate disc atrophy. These findings were often subclinical and required refined instrumentation for discovery, but their significance in the field of treponematoses is evident. Some abnormalities were noted in the cerebrospinal fluids of patients with late yaws, despite the presence of normal total protein levels in these fluids.

The most significant finding was the detection of spirochaetes in the aqueous humour of two patients with late yaws. These organisms stained with the fluorescent antibody stain for *T. pallidum*. One of the patients was seroreactive and the other was seronegative. Seronegative late yaws with a reactive cerebrospinal fluid reagin test was also observed.

This study is the first to report the presence of treponemes in the human eye in late yaws.

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## RESEARCH AND EVALUATION

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**POLYESTER SPONGE SWABS TO FACILITATE EXAMINATION FOR GENITAL INFECTION IN WOMEN.** J. K. Oates, S. Selwyn, and M. R. Breach—Venereal Diseases and Bacteriology Departments, Westminster Medical School, London, S.W.1., England. *BR J VENER DIS* (London) 47:289-292, August 1971.

Authors' summary: A small polyester sponge swab has been designed and tested in the examination of women for genital infections. It absorbs over three times as much genital secretion as conventional swabs, facilitates the rapid collection of specimens for microscopy and culture in the diagnosis of gonococcal, trichomonal, and candida infections, and is also very suitable for obtaining specimens for cervical cytology because of its moderately abrasive texture. In laboratory tests gonococci survived more than 8 hrs. in the swab without the use of transport medium. In routine clinic use, gonococcal cultures were obtained from the sponge swabs in about 5 percent of 1,082 unselected women attending the clinic. Equivalent numbers of positive cultures were obtained in a series of 1,118 women examined by the more laborious use of wire loops and charcoal-coated swabs. Positive smears were obtained in about 9 percent of cases in both series.

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**CHANGES IN THE SERUM TRANSAMINASES IN PATIENTS WITH SYPHILIS.** B. S. Tio, C. H. Beek, E. C. van Reede, and M. G. van den Berg—Department of Venereology, Medical Faculty, Rotterdam Academisch Ziekenhuis, Dijkzigt, Rotterdam, The Netherlands. *BR J VENER DIS* (London) 47:263-265, August 1971.

Authors' summary: The values of the glutamic oxaloacetic transaminase (SGOT), the glutamic pyruvic transaminase (SGPT), alkaline

phosphatase and zinc turbidity were determined sequentially in eighty cases of syphilis of various stages before, during, and after treatment. Mean values for all tests did not differ significantly between syphilitics and the normal population. Neither the stage of syphilis nor penicillin treatment appeared to have any influence. There were six patients in whom test values were consistently raised; five of these were chronic alcoholics.

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**INJECTION INJURY OF THE SCIATIC NERVE.** Kemp Clark, Phillip E. Williams, Jr., William Willis, and William L. McGavran III. *CLIN NEUROSURG* (Baltimore) 17:111-125, 1970.

Authors' summary: From this review, a rather clear picture of the clinical entity of injection injury has emerged. Onset is painful, with immediate deficit in the vast majority of cases. The injury is usually severe, and may be devastating. Motor function is more seriously affected than sensory. Spontaneous recovery may occur, but residual deficit is present in the majority of cases. Of the 51 cases of injury to the sciatic nerve reviewed here, only seven recovered completely.

The major source of damage is chemical. Certain agents, notably paraldehyde, were found to be more toxic than others. Direct needle injury, volume injury, arterial injury, and hemorrhage seem to play little or no part in most cases. The site of damage is intraneural, unless a very toxic agent is deposited near the nerve. The lesion is in continuity, lying high in the nerve, and a long way from any point useful for measurement of functional return. Infants seem to do less well than older children, because growth disturbances are frequent....

Surgery has a role in the treatment of the injury, and, when specific criteria are met,

surgical exploration is indicated. ... Finally, it must be remembered that this is a preventable injury. ... The physician should consider alternate sites or routes of administration. Repetitive intramuscular injections in infants should be discouraged. The need for a single injection into the buttock in any uncooperative patient should be questioned. With care, this source of patient disability can be eliminated.

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**PREDICTION OF PENICILLIN ALLERGY BY IMMUNOLOGICAL TESTS.** Bernard B. Levine, Anthony P. Redmond, Howard E. Voss, and David M. Zolov—Department of Medicine, New York University School of Medicine, New York, New York 10029. ANN NY ACAD SCI (New York) 145:298-309, September 27, 1967.

Authors' summary: One hundred twenty-eight patients with past histories of penicillin allergy were tested prospectively for penicillin antibodies, and the results were correlated with the subsequent occurrence of an allergic reaction to penicillin therapy. Skin sensitizing antibodies were detected by direct immediate skin tests with benzyl-penicilloyl-polylysine (BPL) and the monor determinant mixture (MDM). IgG and IgM antibodies in the serum were detected by passive hemagglutination assays.

All 108 patients with negative skin tests to BPL and the MDM tolerated penicillin therapy without immediate or accelerated urticarial allergic reactions. Two patients had mild diffuse morbilliform eruptions which appear to have been mediated by IgM antibodies, and not by skin sensitizing antibodies. Four of six patients with positive skin tests to BPL had accelerated urticarial reactions to penicillin therapy. One patient with a positive skin test to the MDM had a diffuse flush reaction beginning one hour after initiation of desensitization with increasing doses of benzyl penicillin and sodium benzyl-penicilloate. IgG antibody titers (assayed by hemagglutination) were found to be of some value in predicting the occurrence of allergic reactions to penicillin in patients with positive skin tests to BPL. These tests appear promising as reliable clinical methods to objectively detect

the potential severe allergic reactor to penicillin. Large-scale studies are now needed to determine the limits of their clinical reliability.

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**IMMUNOLOGICAL STUDIES ON TREPONEMAL ANTIGENS. II. SEROLOGICAL CHANGES AND RESISTANCE TO INFECTION IN RABBITS IMMUNIZED WITH CULTURE SUPERNATANT OF AVIRULENT *Treponema pallidum*.** N. N. Izzat, E. B. Smith, S. W. Jackson, and J. M. Knox—Department of Dermatology and Syphilology, Baylor College of Medicine, Houston, Texas 77025. BR J VENER DIS (London) 47:335-338, October 1971.

Authors' summary: Rabbit hyperimmune antisera experimentally produced against culture supernatant of avirulent *T. pallidum* were reactive in the VDRL and FTA-ABS tests. The VDRL reactivity was induced in both test and control animals, while the FTA-ABS reactivity was demonstrated only in the test animals. Hyperimmunization with the supernatant antigen did not protect animals against challenge doses of virulent *T. pallidum*.

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## PUBLIC HEALTH METHODS

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THE MATTER OF VENEREAL DISEASE IN 1971. R. H. Kampmeier—Vanderbilt University School of Medicine, Nashville, Tennessee. ANN INTERN MED (Philadelphia) 75:793-795, November 1971.

Venereal diseases today are predominantly diseases of the young. The rate for syphilis among those in the half of our population that is below age 24 years is the same as for all persons older than 25 years; the rate for gonorrhea is 372 per 100,000 for those under age 24 and 179 for all ages above 25. In 1969, of the notifiable diseases, only scarlet fever and streptococcal sore throat (400,000 cases) approached the magnitude of genitoinfectious diseases (700,000 cases). To these must be added the estimated unreported 55,000 cases of infectious syphilis, 94,000 "other" cases of syphilis, and the 1,018,210 cases of gonorrhea.

The genitoinfectious diseases demand separate and different approaches to their control than do the other infectious diseases. The other diseases are progressively decreasing toward the vanishing point because of environmental control, immunization, and immunity; none of these potent factors aid in the control of the venereal diseases. Although methods of immunization may be available in the future, education of the public seems to offer the only path now open to combat this pandemic.

If doctors are to have a part in educating our youth, the profession must be equipped for the task. Also, many doctors are ill-informed on the natural history of the genitoinfectious diseases, their symptoms, signs, possible complications, diagnosis, treatment, and their epidemiologic aspects. The major fault in current education in this field is that the student gets information in bits—in gynecologic, genitourinary, dermatologic, and other clinics—but nowhere is a view of the whole spectrum of disease. Continuing education in the genitoinfectious diseases is

especially imperative for those who have graduated from medical schools in the last 15 years.

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THE PREVENTION OF VENEREAL DISEASE. Vernal G. Cave—Director, Bureau of Venereal Disease Control, Department of Health, New York, New York. J NATL MED ASSOC (New York) 63:66-68, January 1971.

Following a review of the background to the current status of venereal diseases, the author states that the increasing rates demand that every possibility of preventing the spread of these diseases be explored. He further states that prevention has never received comparable priority with diagnosis and treatment. "The logical sequence of an effective venereal disease control program should go from educating the public about prevention, to examination, and the treatment." Proposed recommendations include: (1) All should fight to see that communicable diseases, including venereal diseases, be planned and budgeted in this country at the federal level on a categorical basis. (2) Mass media and its representatives should not hesitate to tell the venereal disease story to the public. (3) Everyone, and especially private industry, should support organizations such as the alliances for education about venereal disease. (4) Recognize the vital role of the pharmacist as a member of the health team and as a source of health information in the community. (5) All should demand that venereal disease be eradicated now.

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GONORRHOEA PROBLEMS (DANISH). Sven Ancher Kvorning—Kobenhavns Kommune hospital, Klinikken for Hud-og Konssygdomme, Kobenhavn, Denmark. UGESKR LAEGER (Kobenhavn) 133:1249-1252, July 2, 1971.

English summary: "Infectious gonorrhea is occurring with great and increasing frequency in Denmark and probably considerably more cases occur than those which are reported. Effective reduction of the incidence requires increased interest in the population for recognition and treatment of the disease and, in addition, of the necessity of investigation of the sexual partners. From the medical point of view, more constant forms of investigation for bacteria by means of culture and microscopic investigation and routine investigation when infection is presumed to have occurred are required. Infective secretions may be present in the mouth and anus and in the urethra and cervix. Infectious gonorrhea can only be demonstrated by the finding of bacteria and not by means of serological investigations. Many effective therapeutic agents are available, the choice depending upon the state of resistance of the bacterial strains encountered and states of sensitivity to drugs in the patients."

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VENEREAL DISEASE PROBLEM IN CANADA. S. E. Acres, and J. W. Davies—Epidemiology Division, Department of National Health and Welfare, Ottawa, Canada. CAN NURSE (Ottawa) 67:24-27, July 1971.

Authors' conclusion: Although syphilis rates have been relatively constant in recent years, the disease still presents a national problem. The incidence of gonorrhea is increasing sharply. Because these diseases are tied to complex social and behavioral patterns, there is no one aspect on which we can concentrate resources to achieve control. The authors believe it is up to the medical and nursing professions and society in general to strengthen preventive measures.

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THE INTERNATIONAL INCIDENCE OF VENEREAL DISEASE. T. Guthe and R. R. Willcox—(Dr. Willcox) Department of Venereology, St. Mary's Hospital, London, England. R SOC HEALTH J (London) 91:122-133, May-June 1971.

Authors' summary and conclusions: We have attempted in this symposium to appraise the climate of opinion in which a rising trend of syphilis and gonorrhea—and possibly also of other infections acquired sexually—has taken place in the past decade and apparently continues to take place in spite of national and international measures which have been applied. We have endeavored to assess the major interlocking forces concerned in the spread of infection in rapidly changing environments and developing countries. We must conclude that these rapid changes have created new behavioral and social attitudes with consequent risks of more disease being acquired by sexual activity. In the same period, although important medical and public health developments have taken place these have been outbalanced by other multiple environmental forces which facilitate the spread of venereal disease, the adverse effects of which—being beyond the control of the physician—are likely to continue in the future.

In meeting the present disturbing situation, medical and public health services have, to a varying degree, failed. The adequacy—or rather inadequacy—of these services in the future must be considered in relation to the needs anticipated. . . . Intensified health education needs to be provided for the young and for other high risk groups with a view to prevention, and to ensure that those infected can quickly obtain treatment. . . . Above all, intensified research is required on many problems, particularly in the biochemical and immunological fields. . . . Progress cannot be made against these diseases without interdisciplinary cooperation. Cooperation of the venereologist with those in other fields of medicine (e.g. obstetricians, gynecologists) and with the general practitioner; cooperation of these with the public health workers and epidemiologists; cooperation with the research worker; cooperation of all these with the teacher, health educator and those concerned with the young. Such cooperation must be forthcoming not only at the patient and institu-

tion level but also on an interstate and national basis.

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### Behavioral Studies

CUTANEOUS AND VENEREAL DISEASES SEEN AT A DRUG-ORIENTATED YOUTH CLINIC. Robert N. Richards—170 St. George Street, Suite 206, Toronto 5, Ontario, Canada. ARCH DERMATOL (Chicago) 104:438-440, October 1971.

During an 8-month period a total of 445 patients made 732 visits to a drug-orientated youth medical clinic. Skin diseases accounted for 8 percent of the visits and venereal diseases for 10.5 percent. With the exception of infections and phlebitis secondary to the use of unsterile needles, there were no cutaneous diseases seen in the clinic that could be directly attributed to drugs or drug use. The diseases seen were a reflection of the living habits of this largely transient youthful population rather than of drugs. Drug use appears to be just one more factor found more commonly in this type of person. This was a minority group and their behavioral patterns are not a reflection of youth in general.

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